

LIPONYSSUS PACIFICUS EWING, A SYNONYM OF
LIPONYSSUS SYLVIARUM (CANESTRINI AND
FANZAGO)

(Acarina: Dermanyssidae)

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A study of series of specimens of *Liponyssus sylviarum* (Cn. and Fanzago) taken from various species of birds in California, has revealed variations within series ranging from typical to decidedly atypical specimens.

Since certain of the more atypical specimens seemed to approach very closely the description of *Liponyssus pacificus* Ewing, specimens were sent for verification to Dr. E. W. Baker at the U. S. National Museum. He stated that two of the most atypical specimens collected from a Brewer's blackbird, agreed upon comparison with the types of *Liponyssus pacificus*. Appreciation is expressed to the virology section of the Hooper Foundation for Medical Research for the loan of avian mites during this study.

COMPARISON OF PACIFICUS WITH SYLVIARUM

The anal plate of *L. pacificus*, as illustrated by Ewing (1922), has a truncate posterior margin. In the type series of this species as well as in many specimens of *L. sylviarum* examined, the terminal portion of the anal plate is abruptly folded under, and only upon careful observation is it possible to ascertain that the plate actually has a tapering, rather acutely rounded posterior margin.

The position of the paired anal setae of *L. sylviarum* varies. Usually they are behind the level of the middle of the anus, but on some they may occur at the mid level or even anterior to the mid level of the anus.

Typically, females of *L. sylviarum* have a sternal plate bearing two pairs of setae, with a third pair located just off the plate and postero-lateral to it. This arrangement is not constant, however, for the postero-lateral corners of the plate may approach and in some cases appear to include the third pair of setae. In the type series of *L. pacificus* the lateral branches of the sternal plate are cut off either at or slightly before the third pair of setae and do not extend between the coxae as illustrated by Ewing (1922). Furthermore, the anterior pair of setae of the types may be on the edge of the plate or slightly behind it, agreeing with the variations found in *L. sylviarum*.

The peritreme extends anteriorly a variable distance in *L. sylviarum*, ranging from the level of the second coxae to a point anterior to the posterior margin of the first coxae.

It appears thus that the original description of *L. pacificus* as differentiated from *L. sylviarum* is based on a combination of variable characters and artifacts in the type series, and therefore it is considered a synonym of *L. sylviarum*.

A number of specimens collected from a chipmunk (*Eutamias alpinus* Merriam) were reported by G. Auguston (1941) as *L. pacificus*. These specimens definitely are different from the type series of *Liponyssus pacificus*.

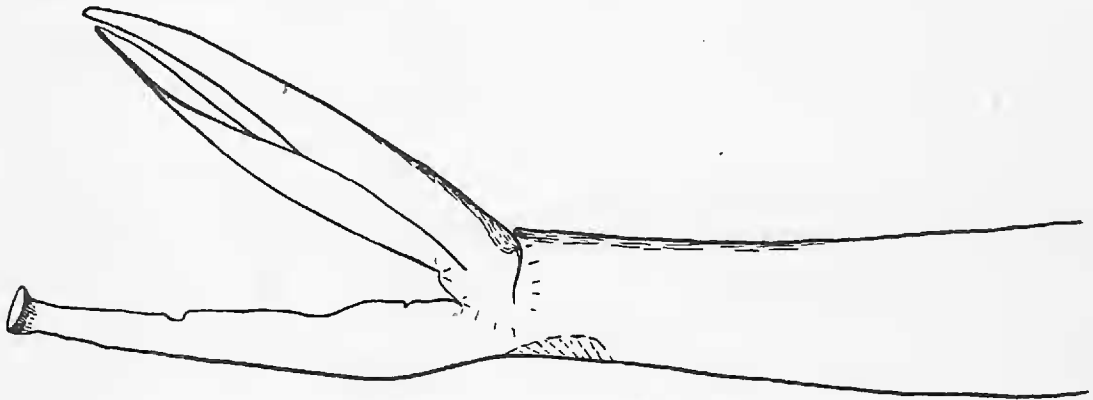


Fig. 1. Chelicera of *Liponyssus sylviarum*. (Canestrini and Fanzago)

In connection with the current study of *L. sylviarum*, details of the cheliceral structure were observed, which so far as I am aware have not been reported previously. As shown by the accompanying figure, the movable arm is divided for part of its length into two processes, or phalanges. Proper orientation is necessary to observe this structure to best advantage, but it is visible even on poorly mounted specimens if examined carefully under an oil immersion lens.

The fixed arm of the chelicera is slightly longer than the movable arm and possesses a slightly flared tip which is set at a right angle to the axis of the arm.

It is possible that the cheliceral structure of *Liponyssus sylviarum* warrants its removal from the genus *Liponyssus*. My observations have not revealed a similar morphology in other species of the genus. Pending more extensive investigation, however, it is best to retain the species in its present status.

LITERATURE CITED

- AUGUSTON, G. F. 1941. Ectoparasite-host records from the Sierran region of east central California. Bulletin So. Calif. Acad. Sciences. 40(3):147-157.
- EWING, H. E. 1922. The dermanyssid mites of North America. Proc. U. S. Nat. Mus. 62(2459):1-26.